

EPA Review Comments

Revised Sediment Trap Sampling Project-Specific HASP Addendum dated April 12, 2018

EPA Review Comments: July 23, 2018

Comment No.	Page (PDF)	Comments on Original HASP Addendum of March 21, 2018	EPA Response to Changes Made in the HASP Addendum of April 12, 2018	AECOM Action Items from 6/6/2018 Meeting	EPA Responses to Changes in 7/3/2018 Version
1	Page 12 and B2	Task hazard assessments in Attachment 1 - Pre-Job Hazard Assessment and the Site Safety Health and Diving Operations Plan, Section 6.1 - Protocols & Procedures for Surface-Diving Emergencies & Unplanned Events are inadequate for hazards related to contaminated diving operations. Example dive safety plans were provided to the Pre-RD group which included contaminated water diving aspects. All of these should be included and discussed during daily safety briefings.	Revised document is inadequate for hazards related to contaminated diving operations.	Additional revisions will be completed to include the specific examples provided by EPA.	Detailed contaminated diving procedures in the new Section 5 - Decontamination of Global's Site Safety Health and Diving Operations Plan fully addresses this comment.
2	Page 12	Inhalation of VOCs from contaminated sediment must be listed as a potential health hazard for any work in the exclusion zone or contamination reduction zone on the research vessel and the field processing laboratory. According to table 8.3 in the Programmatic HAZWOPER Health and Safety Plan (HASP), the breathing zone will be monitored continuously while sediment trap collection is performed on the vessel.	Not added as a potential health hazard	Hazard identification will be updated to include inhalation of VOCs. PID will be used for continuous monitoring of the breathing zone.	New text added to Pre-Job Hazard Assessment addresses VOC monitoring.
3	Page 12	For any work in the exclusion zone or contaminant reduction zone, rubber boots (or equivalent material capable of decontamination) with a safety toe are required. Leather boots will not be acceptable for this application.	They specified rubber or leather boots with boot covers, safety toe		
4	Page 12	The diver must have a slick rubber or trilam suit capable of contaminated water diving (CWD) decon, (neoprene not allowed for gloves, suit or neck dam) along with a full face mask that sits directly on decon compatible hood (or helmet mating to the suit, or less ideal, a latex neck dam), and decon compatible gloves. Neoprene neck dams will not be allowed on the project - they leak substantially and may not be used.	Drysuits were added but it should be clarified in the plan that the drysuits are made of slick rubber or trilam capable of contaminated diving decon and along with a full face mask that sits directly on decon compatible hood (or helmet mating to the suit, or less ideal, a latex neck dam), and decon compatible gloves. Neoprene neck dams will not be allowed on the project - they leak substantially and may not be used. Neoprene gloves will also not be allowed.	Information on the dry suits, hood/helmet, and gloves to provide adequate protection for divers will be included.	Details on the type of drysuits and accessories for contaminated diving provided in the new Section 5 - Decontamination of Global's Site Safety Health and Diving Operations Plan fully addresses this comment.
5	Page 13	The listed items are procedures not PPE. The list of PPE should be consistent with that described in the sodium azide SDS (Attachment 6)	Clarified that the listed items are hazard controls and the PPE listed conforms with SDS.		
6	Page 14	Additional information should be provided in this section in the event that sediment with non-aqueous phase liquid (NAPL) is encountered when retrieving sediment traps or on diver's suits. In those situations, decontamination procedures and management of investigation-derived waste will be different from what is described here.	Specified NAPL related decontamination and IDW handling.		
7	Page 14	See previous comment on rubber safety boots.	They specified rubber or leather boots with boot covers, safety toe		
8	Page 18	Training specified in Attachment 1, Pre-JHA Steps 1-3 is inadequate. All divers and workers in the exclusion zone (EZ) or contamination reduction zone (CRZ) must have taken 40 hour 1910.120 HAZWOPER to participate in these activities—please update HASP accordingly. 40-hour HAZWOPER for this work was a requirement of the Programmatic HASP.	HAZWOPER 40-hour was added to the list of training requirements for steps 1-3.		
9	Page 32	General Comment: The Job Safety Analysis (JSA) in this section at times differs with the Pre-Job Hazard Assessment presented in the AECOM HASP Addendum. Workers should review both the AECOM and Gravity health and safety plans, and in any instances that safety procedures are not the same, the more protective measure shall be taken.	A statement must be added at the beginning of the HASP Addendum that safety procedures of the Programmatic HASP also apply, must be reviewed, and in instances where safety procedures are not the same, the more protective measure shall be taken.	Requested statement will be added.	The statement was added at the beginning of the HASP Addendum.
10	Page 35	As described in the AECOM Programmatic HAZWOPER Health and Safety Plan (HASP) and the HASP Addendum for sediment traps, Type III or Type V PFDs are acceptable for over-water work (see Section 3.2.5 below). Type III and Type V PFDs allow for easier movement and are suitable for applications during work at Portland Harbor.	Listed the more generic USCG approved PFD which is consistent with the Programmatic HASP.		
11	Page 35	Gravity should specify which of the USCG recommended equipment will be included on board the vessel. If any of the recommended equipment from this list will be omitted, Gravity should specify why it is not necessary. EPA strongly prefers all USCG recommended equipment be included in the vessel.	Language indicates that the list of USCG equipment will be used.		
12	Page 44	As described in the Programmatic HASP, 40 degrees F was established as the minimum working temperature for this project (refer to the general comment at the start of Section 3.0)	A bullet was added, "Adopt by reference any Client specific minimum working temperatures to minimize cold stress." The client specified minimum is listed in AECOM's parent HASP (Programmatic HASP).		No additional changes were required.
13	Page 46	Table 4-4 should describe air monitoring during sampling, outside of the boat house.	Included air monitoring with a PID inside and outside of the cabin		
14	Page 49	Figure 5 hazard zone figures are inadequate. A hazard zone figure must be included with decon discussion that includes the EZ, CRZ, and support zone (SZ). If boat changeups are possible, include multiple figures specific to each boat. Acceptable example figures at attached. EPA oversight will be stopping work if the hazard zones are not adhered to (e.g. lunch in the CRZ or EZ, moving equipment thru zones without decon). Wind direction must be specified and configuration adjusted if the wind changes to avoid splashes outside of the EZ. These zones should be clearly identified on all vessels. The hazard zones and relative wind direction should be described during health and safety meetings.	No indication of wind direction or discussion of wind direction relative to EZ, CRZ, SZ, or decontamination.	Figures will be updated to incorporate wind direction and multi-point anchoring of research vessels during dive operations.	Wind direction of the appropriate direction were added to all and new (Global Diving and Salvage) figures showing the EZ, CRZ, and SZ.
15	Page 55	Hospital information and routes should be identified in the final HASP Addendum, including addresses and maps with preferred routes.	Routes are not identified and it is not clear why choosing Providence St. Vincent instead of Providence Portland which is closer and in the programmatic HASP.	Hospital routes and final selection of hospital will be confirmed/clarified. Providence Portland is recommended because it has nearest hyperbaric chamber.	Hospital route map from Swan Island Boat launch to Providence Medical Center was added.
16	Page 59	Offshore medical certifications are not included. The final HASP Addendum should at a minimum identify medical certifications for each field personnel (i.e., CPR, First Aid, AED, etc.)	Final HASP Addendum must include medical certifications.	Global confirms all diver are required to have CPR, First Aid, and AED training, and will provide documentation to AECOM. AECOM will include in plan.	No medical certificates are included in the HASP Addendum but must be included in the final HASP Addendum.
17	Page 68	ADCI consensus standard reference shall be updated to the most current version (6.2) <a href="https://www.adci-int.org/content.asp?contentid=173">https://www.adci-int.org/content.asp?contentid=173</a>	Not addressed	Latest industry-standard dive safety regulations will be confirmed and cited in HASP addendum	The text updated to state the ADCI Industry Standards 6.2 Edition.
18	Page 69	Refer to comment regarding rubber safety toe boots on page 14 of the AECOM Pre-Job Hazard Assessment.	They specified rubber or leather boots with boot covers, safety toe		
19	Page 70	Site Safety Health and Diving Operations Plan, Section 2.1 - Scope of Work. Sediment trap sampling field sampling plan (FSP) excerpt must be provided for the dive brief for EPA review and included in the dive plan. Global divers are not scientists and the dive plan/dive brief must be pre-reviewed by EPA to ensure that instructions will provide for minimum data quality needs.	The added text "scope of work is to assist with the setting and recovery of 4 sediment traps, and installation of porewater samplers into surface sediments, with a (3) man commercial diving team" is insufficient. More details on this work from the FSP must be provided so that the divers can be briefed on what they are doing and understand the critical data collection aspects.	AECOM will work with technical team to provide succinct summary of sediment trap scope and goals to HASP addendum	Additional detail added to this section and the upfront summary of sediment trap sampling of the HASP Addendum.
20	Page 70	This title is not correct for this project and should be updated in the final HASP Addendum.	Changed the title to "SEDIMENT TRAP SAMPLING PROJECT"		
21	Page 70	The diver-worn emergency gas supply should have a minimum of 30 cubic feet of air. Emergency gas supply size for bailout must be specified. A minimum of 30 cubic feet of air is needed for shallow conditions but this must be upgraded to 50 cubic of air if planned dive depth exceeds 30 FSW/gauge depth.	Increased emergency gas to 50 cubic feet.		
22	Page 70	A blue and white alpha flag and red and white recreational flag are required. These flags should be deployed before starting diving activities, and flown for the duration of diving activities. The alpha flag must be 1 meter x 1 meter per USCG regulations and displayed with a recreational flag while at anchor with surface-supplied divers in water.	The text must specify that the alpha flag is 1 meter x 1 meter per USCG regulations	Text edit will be completed	The 1 x 1 meter blue/white alpha flag has been added to the text.
23	Page 70	Diver decontamination procedures must be included in the Diving Operations Plan. These procedures must describe in detail the methods, responsibilities, locations, and safety requirements during decontamination. EPA's expectation is thorough potable water decon (not river water) which has been shown to be effective in removing sediment particles from appropriate PPE and better than 95% effective in removal of pathogens. Diver decontamination should occur in the ... in the exclusion zone/swim step/drop bow.	No diver decontamination procedures were added to the Diving Operations Plan.	Example plans sent by EPA will be reviewed and appropriate procedures will be incorporated into diving operations plan.	Detailed contaminated diving procedures in the new Section 5 - Decontamination of Global's Site Safety Health and Diving Operations Plan fully addresses this comment.
24	Page 71	Maximum anticipated bottom times should be included in this section.	No maximum anticipated bottom times were included.	Text is already provided stating that no depths will be completed that need to follow decompression tables.	No changes needed.
25	Page 71	Section 2.4 - Diver Ingress and Egress must specify emergency egress for an unconscious diver, which may entail use of a davit or crane.	No specific emergency egress for unconscious diver has been specified.	This text will be provided	Comment addressed by Global's new Emergency Diving Protocols, No. 15 - Unresponsive Diver, which includes use of a rescue davit if no bow ramp is available.
26	Page 72	The pre-dive safety inspections should include communications tests with divers to ensure diver communications systems are fully functional.	Added checks of communications and video to the pre-dive inspections.		

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27	Page 79	Section 5.2.1 - Diver Hyperbaric Injury is inadequate. The nearest chamber capable of treating an injured diver must be identified (e.g. Providence). Seattle locations may be listed as a backup as time allows.	No changes were made to address this comment. They do specify "a recompression chamber at Global's Seattle Office or Hospital," but do not say which one.	Text already included in Section 9.1. However, this section and others (p.20-37) was accidentally omitted from 4/12/18 version of HASP Addendum. Will be added to next revision	The previously omitted Section 11.1 Table B contains location of hyperbaric chambers and local hyperbaric facilities.
28	Page 79	Section 5.1.2 - Activating Emergency Service. Is too vague. A specific means of primary call to EMS must be stated (e.g. EMS will be activated via a call on channel 16 (primary), with 911 as a backup via cell phone).	No specific direction on radio channels or emergency phone numbers are provided.	Text already included in Section 9.1. However, this section and others (p.20-37) was accidentally omitted from 4/12/18 version of HASP Addendum. Will be added to next revision	The previously omitted Section 11.1 Table B describes use of marine radio Channel 16 to call for emergency medical services and mobile device call to 911.
29	Page 99	Site Safety Health and Diving Operations Plan, Section 9 - Site Specific Health & Safety Plan Acknowledgement Sheet. 11. Before initiating diving, include and provide the signature page to EPA oversite staff that all divers have read and understand the dive plan.	No changes to the plan are needed to implement this requirement.	Site Specific Health and Safety Plan Acknowledgement Sheet will be provided to EPA oversight staff during field operations.	No changes needed to plan.

Notes

	Not responsive to EPA comment
	Partially responsive to EPA comment and needs discussion
	EPA comment addressed